CS 3800 — Lab 01: Client & Project Proposal (Midterm Planning)

Goal

Before building your Midterm Project, you must first design the idea.

In this lab, you will:

- Choose or invent a client
- Describe their problem
- Propose a web application solution
- Think in terms of data, features, and API endpoints (GET, POST, etc.)

This document will serve as the foundation for your Midterm Project.

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1. Client Description

Describe:

- Who the client is (business, organization, or type of user)
- What they do
- Who will use the system

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2. Problem Statement

Explain:

- What is currently inefficient, missing, or broken
- Why a software solution is needed
- Who is affected by this problem

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3. Proposed Solution

Describe:

- What your web application will do
- Who will use it
- List 3–6 main features

Example features:

- Create records
- View records
- Update records
- Delete records
- Search or filter records
- Change status (completed, paid, returned, etc.)

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4. Users and Roles

List:

- The types of users (Admin, Staff, User, etc.)
- What each type of user is allowed to do

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5. Data Model

List your main data entities.

For each entity:

- Give it a name
- List the important fields

Example:

- Task
    - id
    - title
    - description
    - completed

6. API Endpoints

For at least 3 resources, describe the endpoints your system would need.

Example: `tasks`

- `GET /tasks` — What does it return?
- `POST /tasks` — What does it create?
- `GET /tasks/:id` — What does it return?
- `PATCH /tasks/:id` — What does it update?
- `DELETE /tasks/:id` — What does it delete?

You do not need to write code. Describe the behavior in plain English.

7. Example User Flow

Describe one complete scenario.

Example: A user logs in, creates a new item, edits it, and deletes it.

Explain:

- What pages or screens are involved
- What API calls are made in the background (GET, POST, etc.)

Submission

- Submit as a PDF
- Use clear section headings
- Length: approximately 2–3 pages

Grading Rubric (10 points)

Category	Points
Client and problem are clearly defined	2
Solution and features are well thought out	2
Data model is reasonable	2
API design is logical and consistent	2
User flow is clear	1
Organization and clarity	1
Total	10

Important

Your Midterm Project implementation must be based on this design.